

REMARKS

This application has been reviewed in light of the final Office Action dated March 21, 2007. Claims 1-4, 6-13, 15 and 17-24 are pending, with Claims 1, 18, 19, 21, 23, and 24 in independent form. Applicants gratefully acknowledge the indication that Claims 18 and 21 include allowable subject matter and would be allowable if rewritten in proper independent form. However, because these claims are already in independent form, Applicants respectfully request an indication that such claims are allowed. In this regard, Claims 1, 19, 23, and 24 have been amended to, among other things, include a generic form of the features of allowable Claims 18 and 21. In particular, Claims 1, 19, 23, and 24 have been amended to specify that the determining of the focal length of the source digital images includes optimizing an error measure that is a function of the one or more sets of corresponding pixel values. Although these claims are not so limited, support for these amendments can be found in the specification at least at page 9, lines 1-13, which describes an example error measure optimization found in allowable Claims 18 and 21. Favorable reconsideration is respectfully requested.

Claims 1, 19, 23, and 24 stand rejected under 35 U.S.C. §112, first paragraph. Without conceding the propriety of these rejections, the questioned limitations have been removed from these claims, because Applicants believe they are unnecessary for patentability, as set forth in more detail below.

Claims 1-3, 6, 7, 13, 15, 17, 19-20, and 22-24 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 6,097,854 (Szeliski et al.) in view of U.S. Patent No. 5,461,440 (Toyoda et al.). Claims 4 and 8-10 stand rejected under Section 103(a) as allegedly unpatentable over Szeliski et al. in view of Toyoda et al., and further in view of "Reference Input/Output Medium Metric RGB Color Encodings." Claim 11 stands rejected under Section 103(a) as allegedly unpatentable over Szeliski et al. in view of Toyoda et al. and U.S. Patent No. 5,083,209 (Inoue et al.). Claim 12 stands rejected under 35 Section 103(a) as allegedly unpatentable over Szeliski et al. in view of Toyoda et al. and U.S. Patent No. 6,603,928 (Hirai et al.). Applicants respectfully submit that the claims are patentable over the rejecting references taken separately or in any proper combination for at least the following reasons.

Independent Claim 1 requires a method for producing a composite digital image, including providing a plurality of partially overlapping source digital images having pixel values that are linearly or logarithmically related to scene intensity. The source digital images have overlap regions, and pixels of the source digital images correspond in scene content. The source digital images differing in scene content outside the overlap regions. The method also includes determining the focal length of the source digital images from one or more sets of corresponding pixel values of the source digital images in the overlap regions. The determining step includes optimizing an error measure that is a function of the one or more sets of corresponding pixel values. The method further includes computing from the determined focal length, a radial exposure transform to compensate for exposure fall off as a function of the distance of a pixel from the center of the digital image. In addition, the method includes modifying the source digital images by applying the radial exposure transform to one or more of the source digital images to produce adjusted source digital images; and combining the adjusted source digital images to form a composite digital image by blending said overlap regions.

A notable feature of Claim 1 is the determining step that determines the focal length of the source digital images by at least optimizing an error measure that is a function of the one or more sets of corresponding pixel values. This feature of determining the focal length of the source digital images provides a robust estimate of focal length. Support for this feature can be found in the specification at least at page 9, lines 1-13.

The Office Action states that the step of determining the focal length recited in Claim 1 is “taught by Szeliski (column 15, line 65 – column 16, line 62; and figure 1:110).” No other reference is cited as teaching the determining step of Claim 1. While the Szeliski et al. Patent may teach determining focal length, it is not understood to teach or suggest determining focal length at least by optimizing an error measure that is a function of the one or more sets of corresponding pixel values, as now required by Claim 1.

In particular, the Szeliski et al. Patent is understood to determine focal length by first computing perspective transforms relating two or more images; where the focal lengths of each image are estimated from the parameters of the perspective transforms using the equations in columns 15, lines 25-46. As

stated in column 15, lines 47-54, the focal length is determined by computing the geometric mean (or median, in the case of more than two images) of the focal lengths estimated for each image. This approach is not understood to be the determining of the focal length of source digital images by at least optimizing an error measure that is a function of the one or more sets of corresponding pixel values, as required by Claim 1.

For at least the above discussed reasons, Applicants respectfully submit that Claim 1 is patentable over the rejecting references taken separately or in any proper combination for at least the above-discussed reasons.

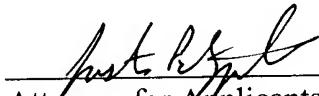
Rejected independent Claims 19, 23, and 24 include the same or similar features as those discussed above in connection with Claim 1 and, therefore, are submitted to be patentable for at least the same reasons.

The other claims in this application depend from one of the independent claims discussed above and, therefore, also are submitted to be patentable for at least the same reasons. Since each dependent claim is deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

This Amendment After Final is believed to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. §1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and the issuance of a notice of allowance.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.